



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,082	02/02/2004	Tsutomu Tsukagoshi	Y2238.0056	6555
32172 7590 08/18/2008 DICKSTEIN SHAPIRO LLP 1177 AVENUE OF THE AMERICAS (6TH AVENUE) NEW YORK, NY 10036-2714				
EXAMINER				
BARON, HENRY				
ART UNIT		PAPER NUMBER		
2616				
MAIL DATE		DELIVERY MODE		
08/18/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/768,082

Applicant(s)

TSUKAGOSHI ET AL.

Examiner

HENRY BARON

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

**PACKET COMMUNICATION SYSTEM, NETWORK DEVICE AND METHOD OF MANAGING
RESOURCE EMPLOYED THEREFOR**

Response to Arguments/Remarks

1. Claims 1 – 24 are pending in the present application with claims 1, 2, 9, 10, 17 and 18 amended.
2. Applicant's arguments filed 05/16/2008 have been fully considered but they are not persuasive.
3. Applicant argues that among the limitations recited in independent claims 1 and 9 that are neither disclosed nor suggested in the art of record is the limitation of a "resource management means for managing resources of the user data processor means, the resource management means being provided in the user data processing means." Similarly, independent claim 17 recites: "the user data processing means managing resources of the user-data processing means." These limitations were rejected in the Office Action by the combination of La Porta and AAPA. Applicant argues that the Office Action alleges that La Porta shows an architecture where resource management means are provided in the user data processing means, but La Porta describes "a distributed, server based communications network architecture in which various traditional call processing functions, such as switching fabric or channel control, call control, connection control are separated into distinct application processes with clearly defined interfaces for communications between these application processes." Applicant asserts that connection control and call control functions are not user data processing functions. La Porta discloses that "[f]unctions related to channel control include a) management of resources such as, VPCIs and VCIs, on a link by link basis, and b) entries and updates of VCI translation table data that are needed to interconnect channels that are part of a connection." Applicant further argues that management of these resources are on a link-by-link basis, and as such, must be strictly managed. Applicant asserts that the Office Action does not provide a citation to La Porta that teaches such resource management is maintained in or by "the user data processing means," as recited in independent claims 1, 9 and 17.

Art Unit: 2616

4. Examiner replies that Applicant's admitted prior art (AAPA) provides the basis systems where a generic resource management system provides central resource management in response to user requests, but is lacking in disclosing of a decentralized resource management means being provided in the user data processing means. The architecture taught by LaPorta uses a generic resource management means provided in the user data processing means. In LaPorta various traditional call processing functions, such as switching fabric or channel control, call control, and connection control i.e. resource management means are separated into distinct application processes (sic resource management means) with clearly defined interfaces for communications between these application processes. Those distinct application processes may be implemented in separate physical or logically partitioned nodes i.e. user data processing. In other words, LaPorta teaches of a de-centralized resource management means or application processes in, among other things, physically partitioned node. Examiner notes that though connection control and call control functions are not user data processing functions, these features fall under the generic rubric of resource management means. In response to Applicant's argument that management of VPI and VCIs resources are on a link-by-link basis, and as such, must be strictly managed, Examiner notes that claim 1, or any other dependent claims, do not specify the level of resource management means, e.g. strict, loose, etc.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
6. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. Claims 1, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art of Applicant in view of La Porta et al (U.S. Patent 5,434,852) hereafter La Porta.

Art Unit: 2616

8. Considering Claims 1, 9, and 17, Applicant teaches as admitted prior art of a method, network device and packet communication system performing packet communication in which in which incoming and outgoing calls are controlled at call control means, comprising a user data processing means for encapsulating and decapsulating user data (2: [0061] read [t]he user data processing units 66 to 68 each decapsulate the GTP encapsulated user data transmitted from the RNC 5, and encapsulate it again to send for the GGSN 7. To the contrary, the user data processing units 66 to 68 each decapsulate GTP encapsulated user data transmitted from the GGSN 7, and encapsulate it again to send for the RNC 5.); and resource management means for managing resources of the user data processing means. (1: [0004 .0006] read A conventional packet communication system basically comprises, shown in FIG. 7, a mobile unit 3, an SGSN, The SGSN 9 serves as a core network node in the packet communication system, in which a C-plane (call control section) comprises a plurality of call processors 92 and 93, .. a resource management processor.).

9. But Applicant's admitted prior art does not teach of the resource management means being provided in the user data processing means.

10. LaPorta teaches of an architecture where the resource management means being provided in the user data processing means. (Abstract read .. [i]n the architecture, various traditional call processing functions, such as switching fabric or channel control, call control, and connection control i.e. resource management means are separated into distinct application processes (sic resource management means) with clearly defined interfaces for communications between these application processes. Those distinct application processes may be implemented in separate physical or logically partitioned nodes i.e. user data processing means also (2: [0009] read .. [t]he present invention is directed to a distributed, server-based communications network architecture in which various traditional call processing functions, such as switching fabric or channel control, call control, connection control i.e. resource management means, are

Art Unit: 2616

separated into distinct application processes with clearly defined interfaces for communications between these application processes).

11. It would have been obvious at the time the invention was made by a person of to having ordinary skill in the art to modify the method, network device and packet communication system performing packet communication teachings of the admitted prior art to incorporate resource management means to be provided in the user data processing means as taught by LaPorta.

12. The modification of the prior art in this manner which distributes the resource management means into call user data processing allows the resource management means to operate autonomously and removes delays and mitigates a single point of failure of communication and processing contention of multiple user data processor means for a single resource management means as in the previous prior art architecture.

13. Claims 2 – 8, 10 – 16, and 18 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of La Porta et al (U.S. Patent 5,434,852) hereafter La Porta and in further view of Xu et al (U.S. Patent 6,909,609).

14. Considering Claims 2, 10, and 18, though Applicant's admitted prior art modified by La Porta teaches of a method and network device with resource management means that manages QoS computation for connections (7: [0023-0025]), however the references do not explicitly teach of managing an available resource ratio indicating a ratio of remaining bands a number of remaining sessions relative to band resources and the number-of-sessions resources respectively of the user data processing means.

15. Xu teaches of a call admission control in a telecommunication network where a bandwidth ratio that indicates a ratio of remaining bands and the number of remaining sessions relative to band resources and the number-of-sessions resources of the user data processing means. (7: [0010-0020]read B, total

Art Unit: 2616

effective bandwidth required for an incoming call and B' calls (i.e. sessions) relative to the provisioned bandwidth).

16. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify the data processing means of La Porta with the bandwidth ratio teachings of Xu.

17. This modification allows the resource management means to record available bandwidth for each data processing means when it allocates or de-allocates capacity and thus establishes the data processing capacity of each user data processing means.

18. In regards to Claims 3, 11, and 19, La Porta teaches that call control means comprises storage means for storing the available resource ratio of the user data processing means that is notified from the resource management means (6:[0054-0057] read user and service database).

19. In consideration of claim 4, 12, and 20, Applicant admitted prior art teaches the user data processing means attaching the available resource ratio to a response signal from the call control means and then sends the resulting response signal to the call control means, (1: [0015] read .. conventional resource management technique also encounters a problem because the resource management processor responsible for centralized control of processing bands and the number of processing sessions for all the user data processing units must work on matching and linking of information between the call control section and user data processing units ...)

20. In consideration to claims 5, 13, and 21 Applicant admitted prior in modification with La Porta teaches the limitations of Claims 4, 12, and 20, but are silent regarding to setting up a session call setup request sent from the call control means in order to establish a session based on the available resource ratio received from the data processing means.

21. However, Xu teaches of setting up a session call setup request sent from the call control means in order to establish a session based on the available resource ratio received from the data processing means.

Art Unit: 2616

(5: [0009-0015] read [t]he call admission decision for an incoming call is based on the provisioned bandwidth for a given communication path, e.g. 309, and the effective bandwidth required to accommodate the incoming call and the number of currently active calls over that communication path.).

22. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify the data processing means of Applicant's admitted prior art modified by La Porta with the session setup teachings of Xu.

23. This modification would be advantageous since the call control means would then be able to determine based on the available resource ratio whether or not to set up a call with the user data processing means.

24. With regards to claims 6 – 7, 14 – 15, and 22 – 23, Applicant's admitted prior art teaches of a packet communication system according wherein the resource management means (user data processing means) attaches the available resource ratio to a response message for a call release request or health check signal message sent from the call control means in order to release the session, and then sends the resulting response message to the call control means. (1: [0015] read .. the resource management processor responsible for centralized control of processing bands and the number of processing sessions for all the user data processing units must work on matching and linking of information e.g. call release request and health check signal message, between the call control section and user data processing units ...) but does not teach of the user data processing means attaching such information

25. LaPorta teaches of an architecture where the resource management means being provided in the user data processing means. (Abstract read .. [i]n the architecture, various traditional call processing functions, such as switching fabric or channel control, call control, and connection control i.e. resource management means are separated into distinct application processes (sic resource management means) with clearly defined interfaces for communications between these application processes. Those distinct application processes may be implemented in separate physical or logically partitioned nodes i.e. user

Art Unit: 2616

data processing means also (2: [0009] read .. [t]he present invention is directed to a distributed, server-based communications network architecture in which various traditional call processing functions, such as switching fabric or channel control, call control, connection control i.e. resource management means, are separated into distinct application processes with clearly defined interfaces for communications between these application processes)

26. It would have been obvious at the time the invention was made by a person of ordinary skill in the art to modify the method, network device and packet communication system performing packet communication teachings of the admitted prior art to incorporate resource management means to be provided in the user data processing means to attach such information as taught by LaPorta.

27. The modification of the prior art in this manner which distributes the resource management means into call user data processing allows the resource management means to operate autonomously and removes delays and mitigates a single point of failure of communication and processing contention of multiple user data processor means for a single resource management means as in the previous prior art architecture.

28. In consideration of claims 8, 16, and 24, Applicant's admitted prior art in medication with La Porta teaches the limitations of Claims 2, 10, and 18, but are silent regarding to the teaching of call control means selecting the user data processing means having remaining resources in accordance with the available resource ratio and sends the call setup request for establishment of the session to the selected user data processing means.

29. Xu teaches of call control means selecting the user data processing means having remaining resources in accordance with the available resource ratio and sends the call setup request for establishment of the session to the selected user data processing means. (3:[0046-0067]).

Art Unit: 2616

30. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify the data processing means of La Porta with the remaining resource teachings of Xu.

31. This modification would be advantageous since the call control means would then be able to determine based on the remaining available resource whether or not to set up a call with the user data processing means.

FINAL ACTION

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

33. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Baron whose telephone number is (571) 270-1748. The examiner can normally be reached on 7:30 AM to 5:00 PM E.S.T. Monday to Friday.

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. B./
Examiner, Art Unit 2616

HB

/Brenda Pham/
Primary Examiner, Art Unit 2616